# ROLE & RESPONSIBILITY MATRIX AND INFRASTRUCTURE DEVELOPMENT INDEX FOR EFFECTIVE IMPLEMENTATION OF MID-DAY MEAL SCHEME: A STUDY OF AGRA DISTRICT

**A**

**SYNOPSIS**
**SUBMITTED FOR REGISTRATION**
**FOR**
**DOCTOR OF PHILOSOPHY**

**IN**
**DEPARTMENT APPLIED BUSINESS OF ECONOMICS**
**FACULTY OF COMMERCE**


**UNDER THE SUPERVISION OF**

**Prof. Vijay Kumar Gangal**

**SUBMITTED BY**

**Devanshi Dixit**



**DAYALBAGH EDUCATIONAL INSTITUTE**

**(DEEMED UNIVERSITY)**

**DAYALBAGH, AGRA-282005**

**MARCH 2018**

## 1.0 INTRODUCTION

Education is the real pillar and building block of the country's development. This moves the way ahead towards child development and leads a quality of life. Child is the future of a nation but today there is a problem of malnutrition. Therefore, his/her hunger for food and education is to be satisfied simultaneously. This gave emergence of introducing such a Scheme which is designed to improve the nutritional status of school going children and to enhance the enrollment, retention and attendance of students in government schools. Under this purpose free **Mid-Day Meals Scheme** is introduced by the government for children of primary and upper primary classes on working days as the National Scheme of Nutritional support to Primary education.

This scheme also helps to spread the feeling of brotherhood, and promote social equity irrespective of caste, religion, creed among the children in schools .It is also visualized that such a scheme promotes friendship and feelings of brotherhood among the children belonging to different caste, color and creed. The Authority of Mid-Day Meal Scheme was created under the Uttar Pradesh Society Registration Act 1860. The authority has been constituted for the operation, management and monitoring for the MDMS. The Mid Day Meal Authority functions are under the overall administrative and supervisory control of the MHRD, Government of India at central level with the coordination of Basic Education Department of State Government.

## 1.1 GENESIS OF MID DAY MEAL PROGRAMME

As per the order of Honorable Supreme Court of India on 28$^{th}$ November 2001, for the direct benefit to the children, cooked food would be provided in all primary (1 to 5 classes) schools of all States from 1-4-2004.Later on this Scheme has been extended to the students of Upper Primary (6 to 8 classes) school.

With the central assistance provided under the scheme of food grains free supply on 100 grams per child per school a day and also focus on subsidy over food grains transportation having extreme of Rupees 50 per quintal. For much more developing and monitoring the IVRS

Daily Based Monitoring System has been introduced in mid-day meal. This mechanism of monitoring covers the number of children who take midday meals in primary and upper primary levels of the schools and the number of schools where food is not cooked, is obtained from each school through daily Interactive Voice Response Real time basis. At present with the current update there are more than 25.25 lakhs cook-cum-helper are involved by the State/UTs during 2016-17 for preparation and serving under Mid-Day Meal Scheme.

**1.2 RATIONALE OF MID DAY MEAL**

The following points force to start the Mid-Day Meal Scheme:-

- To ensure the regular attendance, highly enrollment and retention of the students in primary and upper primary school. This gives the **Escalating Figures of the regular students in Enrollment, Attention and Retention** in the school.
- To get the attention in the classroom without food is impossible even if they have their meal before the children leave for school. By the afternoon Children get hungry and they won't able to give attention specifically who do not bring lunch box or who are residing a long distance away from the School. Mid-Day Meal gave the solution by **Preventing Classroom Hunger** amongst such children
- Mid-Day Meal also **Facilitate healthy growth and regular source of "complementary nutrition**" for children in schools. Providing the prevention of Malnutrition among the children.
- With the regimented Mid-May meal it approaches toward the **Improvement in Intrinsic Educational Values and healthy good habits** in the children values. The habit are such as washing hands after and before meal, understanding good hygiene, clean drinking water and other related matters.
- Sharing and caring common meals with each other among children under Mid-Day meal **Spread egalitarian values and foster the Social Equality**. Breaking the barriers of caste and class in the school. Teaching to the children of how to avoid caste prejudices by appointing cooks from SC/ST communities.

- The Mid-Day Meal scheme contributes in **Enhancing Gender Equity**. By decaying the barriers that stops girls from going to school, providing employment for women and many other initiatives. This gave the special stake of women and girl children in the Mid-Day meal scheme.
- The **Cognitive, Emotional and social development with Psychological Benefits** is also addressed by Mid-Day meal. As Psychological Deprivation leads to insecurity, stress, anxiety etc. that affects the human life.

### 1.3 MID DAY MEAL SCHEME IN UTTAR PRADESH

The following table gives the detail of Mid-Day Meal Scheme (MDMS) in Uttar Pradesh.

**Table 1-Quaterly Progress Report of Mid-Day Meal Scheme in U P (April to June 2017-18)**

| No. | School type | School covered with scheme | | | School where mid-day meals are being distributed (according to the quarterly progress of April to June 2017) | | | Residency school |
|---|---|---|---|---|---|---|---|---|
| | | Primary | Higher primary | Total school | Primary | Higher primary | Total school | |
| 1 | Government / state | 27 | 503 | 530 | 24 | 379 | 403 | 127 |
| 2 | Council | 113335 | 45697 | 159032 | 113246 | 45661 | 158907 | 125 |
| 3 | Aided | 566 | 7719 | 8285 | 560 | 6529 | 7089 | 1196 |
| 4 | Madarasa | 71 | 475 | 546 | 64 | 391 | 455 | 91 |
| 5 | Special training center (child labor school) | 126 | 0 | 126 | 126 | 0 | 126 | 0 |
| Total | | 114125 | 54394 | 168519 | 1114011 | 53554 | 167565 | 1539 |

Source-http://upmdm.org

In these schools, 123.57 lakh students studying at the primary level and 54.94 lakh students are benefiting at the upper primary level.

## 2.0 REVIEW OF LITERATURE

As the review of literature provide the theoretical background to our study. With this motive the researcher has reviewed the following studies:-

| S. No | Year | Author | Publication Details | Paper Title | Objectives | Research Methodology | Findings |
|---|---|---|---|---|---|---|---|
| 1 | 2017 | Nazni P, Abdul Qayoum Lone | (Innovara Jouranal Of Food Science, Vol 5, Issue 2,2017,Issn;2321;550x) | A Comparative Study On Mid-Day Meal And Non-Mid-Day Meal Beneficiaries Of Budgam District. | 1. To compare the anthropometric measurements, intellectual, and social development of mid-day meal (MDM) and non-MDM (NMDM) beneficiaries of Budgam district, Kashmir province of Jammu and Kashmir state. | Cross-sectional study is used. | 1. The study shows the possible effects of the MDMs on anthropometric measurements, intellectual, and social development of the school children are very less.<br>2. The reason could be irregular attendance of children in school, less amount of MDM, poor quality of food items in MDMs, less number of appointed teachers, combined teaching of different standard, and lack of classroom. |
| 2 | 2017 | Janmejaya Samal, Ranjit Kumar Dehury | (Volume: 2 Issue: 2, Page(S): 151-162Article First Published Online: August 16, 2017; Issue Published: July 1, 2017 Https://Doi.Org/10.1177/2455133317703212) | Family Impact Analysis Of Mid-Day Meal (MDM) Scheme In India With Special Focus On Child Education And | 1. To enhance enrolment, retention and attendance rates, and simultaneously improve nutritional levels among children<br>2. To do an impact analysis of the MDM scheme of India would be instrumental in charting out the future directions of this programme. | For this study, no primary research has been carried out; rather this paper is based on secondary literature pertaining to MDM with relation to child nutrition and education. The checklist is used. | 1. The researcher finds some unintended consequences, including food contamination or food poisoning. Social discrimination can also be seen as an intended or unintended consequence of MDM |

| S. No | Year | Author | Publication Details | Paper Title | Objectives | Research Methodology | Findings |
|---|---|---|---|---|---|---|---|
| | | | | Nutrition | | | |
| 3 | 2017 | Akshay Patra Foundation | (2017 The Nielsen Company (Us), LlC. Confidential And Proprietary.) | Impact Assessment And A Satisfaction Survey:The Akshaya Patra Foundation Mid-Day Meal Programme Bengaluru & Telangana | 1. To assess the impact of TAPF Mid-day Meal programme on educational outcomes and nutrition levels of children.<br>2. To gauge the level of satisfaction of different stakeholders (students, teachers and parents) towards Mid-day Meal Programme | A mix of quantitative and qualitative study including collation of information from school records, in-depth interviews with school teachers, parents and students and observation of distribution of meal in the study schools. | 1. The study finds that the nutritious meal served by the foundation has helped in improving the attention span in classroom and TAPF students have performed better in their annual exam in comparison to Non-TAPF students for Bengalaru.<br>2. The study finds that an average academic performance in school is better in TAPF schools as comparison to Non-TAPF schools in Telengana. |
| 4 | 2016 | Anshu Narad | (Mier Journal Of Educational Studies, Trends & Practices May 2016, Vol. 6, No. 1 Pp. 68-81) | Implementation Of Mid-Day Meal Scheme In Government Elementary Schools Of Bihar | 1. To explore the facilities available with respect to implementation of Mid-Day Meal scheme in government elementary schools in the following areas: Availability of food grains/food item, Provision of Storage of food grains. | Descriptive Survey study is used. | 1. The study finds that the state has made all efforts to implement Mid-Day Meal Scheme and not focused on whether actually and effectively Mid-Day Meal Scheme.<br>2. The problems are being faced by Mid-Day Meal in charges with respect to implementation of Mid-Day Meal Scheme |
| 5 | 2016 | Rajeshwar Kadari , Sonal Mobar | (South Asian Journal Of Engineering And Technology Vol.2, No.10 (2016) 1–9, | Strengthening The Mid-Day Meal Scheme Through | 1. To deals with strengthening of the Mid-Day Meal Program (MDMP) through the use of Management Information System (MIS). | Descriptive study is used. | 1. The study finds that by Using of IVRS system have many advantages as it is a feasible system that can be implemented easily. |

| S. No | Year | Author | Publication Details | Paper Title | Objectives | Research Methodology | Findings |
|---|---|---|---|---|---|---|---|
| | | Roy | Issn Number (Online): 2454-9614) | MIS. | | | 2. In reference to MDM scheme, linkage with consumption of food-grain and cooking cost can be done which will help in stabilizing the system |
| 6 | 2016 | Manpreet Kaur | (International Journal Of Applied Research, Issn Print: 2394-7500,Issn Online: 2394-5869,Impact Factor: 5.2,Ijar 2016; 2(5): 14-17,www.Allresearchjournal.Com,Received:04-03 2016,Accepted: 05-04-2016) | Mid-Day Meal Scheme: An Analysis Before And After | 1. To highlight the objectives, working and performance of mid-day meal scheme.<br>2. To evaluate the MDM scheme by anatomizing the changes in primary schools after this scheme.<br>3. To make comparisons of situations before and after nationwide introduction of this scheme. | The methodology included secondary data which has been collected from government reports, newspapers, journals and government websites etc. The data is based on time series technique | 1. The study finds that as far as MDM is concerned, undoubtedly it is a good effort by the government but there is a dare need to introduce some other measures and remove the loopholes for the ensured success of these measures. |
| 7 | 2016 | Ravi | ( A Thesis Of M.Phil. 2016) | An Assessment Of Mid-Day Meal Scheme In Himachal Pradesh | 1. To evaluate the extent of coverage of Mid-Day Meal scheme<br>2. To assess the availability and adequacy of infrastructural facilities including manpower for implementation of cooked mid-day meal scheme and also for providing universal education to the children at primary stage. | For the purpose of this study the researcher has collected data with the help of primary and secondary methods | 1. The study finds that there is need to increase the funds for strengthening the Mid-Day Meal Scheme and proper functioning system is needed. |

| S. No | Year | Author | Publication Details | Paper Title | Objectives | Research Methodology | Findings |
|---|---|---|---|---|---|---|---|
| 8 | 2016 | Lalita1 & Rekhi T | (Imperial Journal of Interdisciplinary Research (IJIR) Vol-2, Issue-11, 2016 ISSN: 2454-1362, http://www.onlinejournal.in) | Monitoring and Evaluation of Mid –Day Meal in Delhi Schools | 1. To know the dietary practices of children with special emphasis on breakfast, lunch, dinner consumption.<br>2. To monitor and evaluate Mid-day Meal programme in both school in terms of hygiene and sanitation practices. | The data were collected from both the primary and secondary sources. The field study was based on the observations of two government schools in upper primary classes in Delhi in which Mid-Day Meals Scheme was functional. | 1. The study finds that the teachers from both schools reported that there has been a positive impact of mid- day meals on enrolment, health status and that the children seemed more attentive, playful, active and regular.<br>2. It was observed by the researcher (on all the visits) that although the distributors did not follow any kind of personal hygiene practices but whenever they realized that researcher was around, they become conscious and would immediately wash hands, wore a clean gloves etc and also provided disposables to those children who did not carry tiffin boxes/ plates from home. |
| 9 | 2016 | Dr. G. Prathap, M. Rama Mohan & M. Chinnaswamy Naidu | (International Journal Of Multidisciplinary Research And Modern Education (Ijmrme) Issn (Online): 2454 - 6119 (Www.Rdmodernresearch.Org) Volume Ii, Issue I, 2016 644) | Evaluation Of The Mid-Day Meal Programme In India: An Overview | 1. To study the performance of Mid-Day Meal Programme in India<br>2. To study the Evaluate of Mid-Day Meal Programme | Secondary data is used in the study | 1. The study finds that these reforms were actively undertaken and policy changes were made so as to strengthen the MDMS and to make it available to each and every school going child.<br>2. The researcher finds that the main intention was to feed more children through schools and making the state accountable and responsible for the children |

| S. No | Year | Author | Publication Details | Paper Title | Objectives | Research Methodology | Findings |
|---|---|---|---|---|---|---|---|
| 10 | 2016 | B.K.Bajpai | (Mid-Day-Meal Authority Uttar Pradesh, Lucknow 2016) | Pilot Social Audit Of Mid-Day-Meal Scheme In Barabanki And Shrawasti Districts Of Uttar Pradesh. | To study the impact of MDM and Supply of food grains. | Field study is done with checklist and focused group discussion. | 1. The researcher finds that MDM scheme has been successfully achieving its objectives like enrolment, attendance, stay in school hours, social harmony and nutrition of student are increased in districts however, it needs to include Secondary school opened under Rastriya Madhyamik Shiksha Abhiyan (RMSA) as well as Maqtab Madarsa in the State.<br>2. Pilot Social Audit of the Mid-Day Meal Scheme is found to be very essential and fruitful for enhancement of community participation |
| 11 | 2016 | Kanchan Rani | (A thesis of Ph.D in management, The Department of Management and Humanities Sant Longowal Institute of Engineering and Technology) | Implementation And Performance Evaluation Of Mid-Day Meal Scheme In Punjab – A Case Study Of Sangrur, Barnala & Mansa Districts | 1. To study the implementation level of Mid-day Meal scheme in various districts.<br>2. To analyze the impact of Mid-day Meal scheme on promoting enrolment, attendance and retention.<br>3. To study the perception of teachers, students & parents about the impact of Mid-day Meal Scheme on improving health status of the students. | In this study data is collected from field study and pilot survey. For analysis descriptive analysis, ,ANOVA, Multiple Discriminate analysis, correlation, Chi Square test is used | 1. In this study researcher finds that mid-day meal scheme is running almost on regular basis since 2004 and 2007 in primary wing and upper wing respectively.<br>2. There are number of problems which creates impediment in the implementation of the scheme.<br>3. Study finds that the mid-day meal scheme is good effort made by the government to end classroom hunger of the students who belong to |

| S. No | Year | Author | Publication Details | Paper Title | Objectives | Research Methodology | Findings |
|---|---|---|---|---|---|---|---|
| | | | | | | | economically backward section of the society. |
| 12 | 2015 | Md. Firojuddin Molla, Jumafuddin Sheikh | (International Journal Of Innovative Research In Science, And Technology, An Iso 3297: 2007 Certified Organization) Vol. 4, Issue 4, April 2015,Issn(Online) : 2319 – 8753 Issn (Print) : 2347 – 6710 | Impact Of Mid-Day Meal Programme On Educational Level: A Case Study Of Ballabhpur Village, Birbhum District, And West Bengal | 1. To examine the impact of mid-day meal program me on education level, to evaluate educational condition of the study area.<br>2. To find out the problems of education and school dropouts in different level of the study area, to analyses the demographic profile and Educational status. | The data have been collected based on both secondary and primary for the study area. Secondary data have been collected from published and other published organization | 1. In the study researcher finds that the Mid-day Meal program me helped to increase the school attendance children in primary level.<br>2. It also finds that it may be mention that the quantity of the school attendance children in primary level is increases but quality of the students falling down due to lack of management of this concerned programme. |
| 13 | 2015 | Rajshri Jayaramany,Dora Simroth z And Francis De Vericour | (2015, jayaraman@esmt.org, ESMT Berlin.z, simroth@esmt.org, ESMT Berlin. | The Impact Of School Lunches On Primary School Enrolment: Evidence From India's Midday Meal Scheme. | 1. To do a large-scale assessment of the enrolment effects of India's midday meal scheme, which offers warm lunches to 120 million primary school children across India | Panel data set is used for the study | 1. In the study researcher finds that mid-day meals results result in extensive increases in primary school enrolment. |
| 14 | 2015 | Ranjita Sapkota | (2015,Masters In Sustainable Development Practice, Teri University New | Value Chain Analysis Of Mid-Day Meal Scheme In | 1. To meticulously understand the process of value chain on mid- day meal scheme in respect to Karnataka. | Semi structured interviews and Focused group discussion is used in the study. | 1. The study finds that the Mid-day meal scheme being one of the largest school feeding programs in the world has undoubtedly improved the |

| S. No | Year | Author | Publication Details | Paper Title | Objectives | Research Methodology | Findings |
|---|---|---|---|---|---|---|---|
| | | | Delhi, India) | Karnataka | 2. To design the format of value chain analysis (VCA) map, that uses the basic concept of Value Chain Analysis Technique. | | enrolment and attendance of the school children along with an improvement in their nutritional status by reducing the malnutrition rate among them in India.<br>2. Study finds that the Karnataka state government seems to be more active and serious in implementing the scheme to each and every part of the state. |
| 15 | 2015 | P Sahoo | (International Journal Of Extensive Research, 2015. International J Ext Res. 9:26-31,Http://Www.Journalijer.Com E-Print Issn: 2394-0301) | Descriptive Study On Effectiveness Of Mid-Day Meal Programme In Selected Government Primary School Of Bhubaneswar, Odisha | 1. To understand the infrastructure and institutional arrangements for Mid-Day Meal scheme in the State.<br>2. To assess the performance of Mid-Day Meal Scheme in the State.<br>3. To find out the association between socio-demographic variable of students & success rate of mid-day programme. | Survey research is the used to refer to the collection of data directly from the study subject, usually by questionnaire or interview. | 1. The study finds that the Infrastructure level is perfect in all the discipline but following area need to improve – school need the funding for built up proper storage facilities, school have placed to keep raw ingredients in a safe place.<br>2. Researcher finds that school need to have separate cooking place they cook food , school need wide varanda for serving food etc. |
| 16 | 2015 | Shailja Singh, Nisha Gupta | (International Journal Of Science And Research (Ijsr) Issn (Online): 2319-7064 Index Copernicus Value (2013): 6.14 \| | Impact Of Mid-Day Meal On Enrolment, Attendance And Retention Of | 1. To evaluate the impact of mid-day meal on enrolment, attendance and retention of primary school children | Cluster Random Sampling is used in the study. | 1. The study finds that the MDM scheme proves a major mean in improving enrolment and attendance comparatively.<br>2. The study finds that there are some efforts required for the increment in retention of |

| S. No | Year | Author | Publication Details | Paper Title | Objectives | Research Methodology | Findings |
|---|---|---|---|---|---|---|---|
| | | | Impact Factor (2013): 4.438 Volume 4 Issue 2, February 2015 www.Ijsr.Net) | Primary School Children | | | students by increasing the variety and quality of Mid-Day Meal and by incorporating interesting method of teaching. |
| 17 | 2015 | Riya Sharma | (Developing Country Studies Www.Iiste.Org Issn 2224-607x (Paper) Issn 2225-0565 (Online) Vol.5, No.11, 2015 | Mid-Day Meal Scheme In India: The Road Ahead | 1. To understand how the mid-day meal scheme actually works on the ground.<br>2. To identify the achievements so far as well as the remaining challenges. | Secondary Data is used for the study. | 1. The study finds that the scheme has been successful in addressing 'classroom hunger'' and raising enrolment rates in the beneficiary schools.<br>2. The study finds that the performance of Mid-Day Meal scheme in food security and child nutrition become crucial in tribal areas. |
| 18 | 2014 | Akshay Patra Foundation | (2014,Akshay Patra Foundation) | Assessment Of Mid-Day Meal Programme In 8 States | 1. Elimination of classroom hunger<br>2. Social equity<br>3. Nutrition and health<br>4. Enrolment, Retention and Attendance | A combination of quantitative and qualitative methods was used in this assessment study | 1. The Researcher finds the positive impact of the mid-day programme. Classroom hunger was addressed significantly, with attendance and enrolment receiving a boost.<br>2. Study also finds the recommended nutritional requirements were being fulfilled and the food was healthy and hygienic too. |
| 19 | 2014 | Mehjabeen Jagmag, Shailey Tucker | (2014, Field Notes On Accountability, No. 5 Accountability Initiative) | Interactive Voice Response System: Closing | 1. To understand the Use of Interactive Voice Response System (IVRS) in the MDMS | Field survey is used. | 1. The Study finds that information collected by IVRS should expand to cover the entire process of the Scheme and not just the final step of |

| S. No | Year | Author | Publication Details | Paper Title | Objectives | Research Methodology | Findings |
|---|---|---|---|---|---|---|---|
| | | | | Feedback Loops And Enhancing Accountability In The Mid-Day Meal Scheme | | | serving the meal, such as the flow of funds and food grains. .<br>2. Finally study finds, the administrative system should be overhauled to use this information to deliver on outcomes. |
| 20 | 2014 | Iksha Chhabra, K. Ashok Rao | (Indian Journal Of Community Health / Vol 26 / Supp 02 / Dec 2014) | Challenges And Interventions In Meeting Delivery Of Nutrition In Mid-Day Meal Scheme: A Pilot In District Faizabad, Uttar Pradesh. | 1. To study on the Delivery of nutrition requires comprehensive overhaul to include interventions in area of storage, preparation and practices, stoves, human resource development and community participation. | Based on a baseline survey | 1. The study finds that there is a accomplishing comprehensive improvement within existing cost of conversion per child is a challenge particularly since there are no economies of scale in rural areas.<br>2. The study finds also the methodologies created in the pilot for hygiene and food safety, awareness and capacity building through campaigns. |

## 2.1 GAP OF THE RESEARCH

By receiving the above mentioned studies, the researcher finds-

- The most of the studies covering the absenteeism of students at a primary level, talking Mid-Day Meal Scheme as a tool to increase the enrolment of the students particularly in rural areas.
- The most of the studies are related to a particular locality of rural areas, lot of work has been done to ensure the quality and hygiene of food under the Mid-Day Meal Scheme.
- There is no such study where the infrastructure required for effective implementation of Mid-Day Meal Scheme has been assessed.
- In addition to this the Infrastructure Development Index which is one of the most important basic ingredient for the success of any scheme, has been totally missed out.
- Researcher fails to find to get any study in which the role and responsibility of different authorities has been discussed for effective implementation of Mid-Day Meal Scheme.
- The researcher fails to find the studies which are related to role and responsibility matrix of the concerned authorities of Mid-Day Meal Scheme.

## 2.2 RESEARCH QUESTIONS

1. What are the rationale of the Mid- Day Meal Scheme?
2. What is the mode of operandi of Mid-Day Meal Scheme?
3. What is the impact of Mid-Day Meal Scheme on enrolment, attendance and retention of primary school children?
4. Is there any social equity followed under Mid-Day meal scheme?
5. Identify the policy measures for improving the working phenomenon of the Mid-Day Meal Scheme?
6. How to analyze the role and responsibility of authorities involved in the Mid-Day Meal Scheme at state, district and local level?
7. What are the critical issues and challenges associated with the Mid Day Meal Scheme in general and particular in Agra District?

8. Do the basic Infrastructure Facilities exist at school level for effective implementation of the Mid-Day Meal Scheme?
9. Does the existing model of implementation Mid-Day Meal Scheme is effective & efficient?

## 3.0 NEED OF THE RESEARCH

The role of Education is to develop the child mentally, physically and spiritually to lead a quality life. Appreciating the link between Health and Education, the government introduced a Mid-Day Meal Scheme (MDMS).This Scheme has fostered a sense of sharing and fraternity and paved the way for social equality. This Scheme has become part of daily school routine across the country. It gives a boost to universalization of primary education and nutrition support to the children in the schools. Many studies on Mid-Day Meal Scheme deal with the background of Education, Food and Nutrition.

**This study is an attempt to explore effective implementation and working mechanism at the grass root level of MDMS. The proposed study will focus on Role & Responsibility Matrix and Infrastructure Development Index for effective implementation to get its desired working results.**

## 3.1 STATEMENT OF PROBLEM

**How does Mid-Day Meal Scheme be more effective and efficient in present educational scenario in India?**

## 4.0 OBJECTIVE OF THE RESEARCH

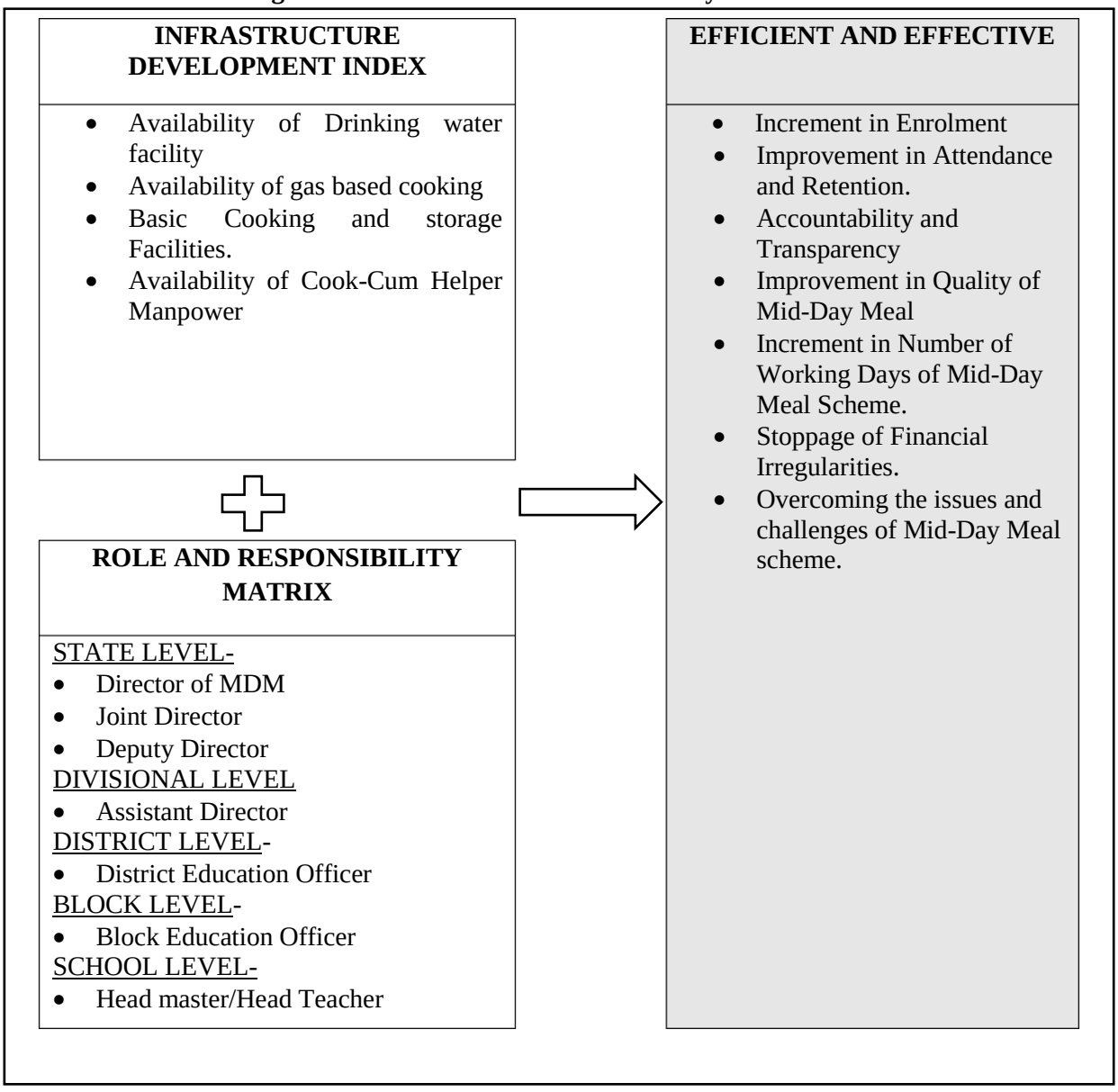
1. To study the rationale of the Mid- Day Meal Scheme.
2. To identify critical issues ( Financial, Human resources, Infrastructural , Supply of Raw Material) and challenges associated with the Mid Day Meal Scheme in general and particular in Agra District
3. To frame the role and responsibility matrix of authorities involved in the Mid-Day Meal Scheme at district and local level.

4. To construct the Infrastructure Development Index for effective implementation of Mid-Day Meal Scheme in Agra District.
5. To develop action plan for efficient and effective functioning of Mid-Day Meal Scheme.

## 5.0 RESEARCH DESIGN

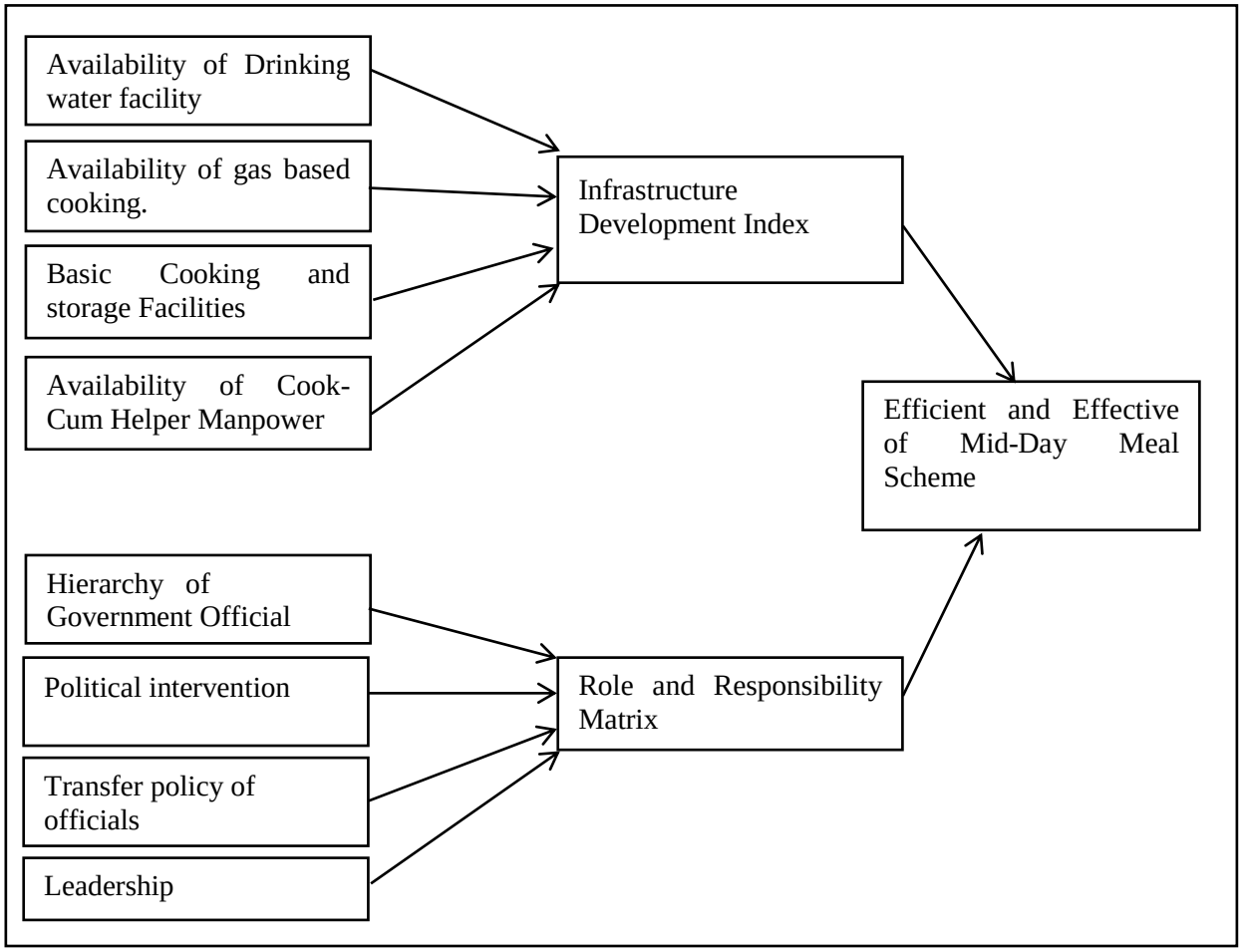
In proposed study, the researcher will formulate the Role & Responsibility Matrix and construct Infrastructure Development Index for effective and efficient implementation of Mid-Day Meal Scheme. The whole of the study may be summarized by Figure 1 given below.

**Figure 1-Efficient and Effective Mid -Day Meal Scheme**



## 5.1. VARIABLE OF THE STUDY

**Figure 2-Variable of the study**


Availability of Drinking water facility
Availability of gas based cooking.
Basic Cooking and storage Facilities
Availability of Cook-Cum Helper Manpower
Infrastructure Development Index
Efficient and Effective of Mid-Day Meal Scheme
Hierarchy of Government Official
Political intervention
Transfer policy of officials
Leadership
Role and Responsibility Matrix

## 5.2. HYPOTHESES

In proposed study the following Hypotheses will be tested to make the study more scientific in nature.

**$Ho_1$ : Y (E/MDMS) = a + $b_1$ (IDI) + $b_2$ (RRM)……+ Ɛ**

**$Ho_2$ : Y (IDI) = a + $b_1$ (DWF) + $b_2$ (GBC) + $b_3$ (BCSF) + $b_4$ (CCHM)……+ Ɛ**

**$Ho_3$ : Y (RRM) = a + $b_1$ (GO) + $b_2$ (PI) + $b_3$ (TP) + $b_4$ (L)……+ Ɛ**

Here-

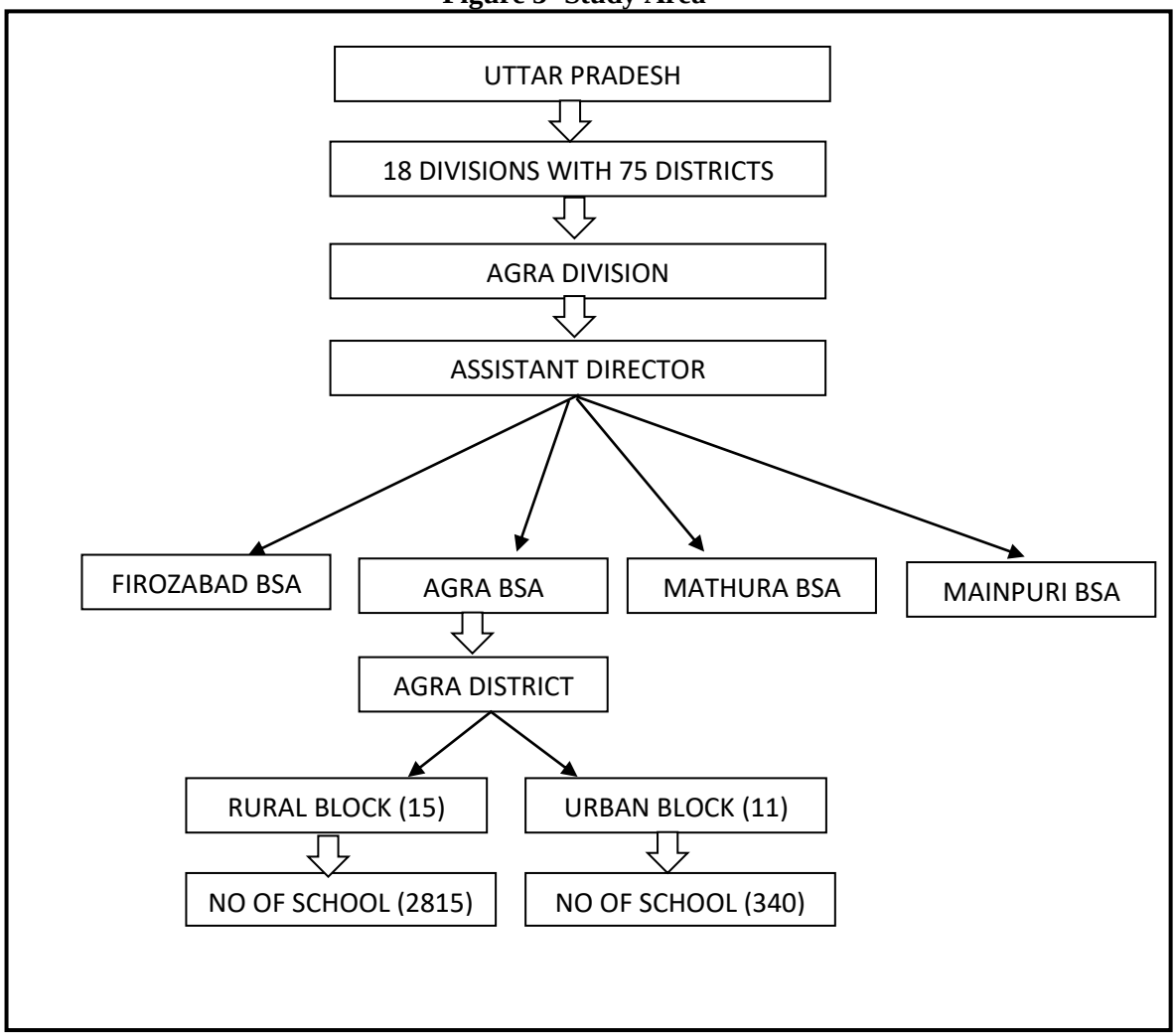
E/MDM= Effectiveness of Mid-Day Meal Scheme, RRM=Role and Responsibility Matrix, IDI= Infrastructure Development Index, GO= Hierarchy of Government Official., PI=Political intervention, TP= Transfer policy of officials, L= Leadership, DWF= Drinking water facility. GBC= Gas based cooking. , BCSF=Basic Cooking and Storage Facilities, CCHM=Availability of Cook-Cum Helper Manpower, Ɛ =Error term

**5.3 SCOPE, DURATION AND AREA OF THE STUDY**

This study will follow the Intensive Fieldwork approach. It includes the implementation and effectiveness of the Mid - Day Scheme in Agra District, state of Uttar Pradesh. The study will include the date from 2010 to 2019.

The Uttar Pradesh is divided into 18 Division and these divisions are subdivided into 75 District. For the research purpose, Agra District will be taken as a study Area out of the Agra Division

**Figure 3- Study Area**



## 5.4. SAMPLE DESIGN

The multilayer sampling method is used for selecting the sample for the study.

**UNIVERSE OF THE STUDY**

**Table 2- Universe of the study**

| | AGRA DISTRICT DIVISION | | | |
|---|---|---|---|---|
| **S.NO.** | **RURAL AREA** | | **URBAN AREA** | |
| | **No. of Blocks** | **No. of schools** | **No. of Town** | **No. of School** |
| 1 | Achhnera | 166 | Achhnera (Mb) | 8 |
| 2 | Akola | 111 | **Agra (M. Corp.)** | **274** |
| 3 | Bah | 208 | Baah (Np) | 6 |
| 4 | Barauli Ahir | 222 | Etmadpur (Mb) | 6 |
| 5 | Bichpuri | 98 | Fatehabad (Np) | 4 |
| 6 | Ettmadpur | 211 | Fatehpursikari (Mb) | 15 |
| 7 | **Fatehabad** | **288** | Jagner (Np) | 6 |
| 8 | Fatehpur Sikri | 175 | Kheragarh (Np) | 5 |
| 9 | Jagner | 164 | Kiraoli (Np) | 7 |
| 10 | Jaitpur Kalan | 200 | Pinahat (Np) | 6 |
| 11 | Khandauli | 185 | Shamshabad (Np) | 3 |
| 12 | Kheragarh | 159 | | |
| 13 | Pinahat | 196 | | |
| 14 | Saiyan | 181 | | |
| 15 | Shamsabad | 251 | | |
| | Total No. of School | 2815 | | 340 |
| Total No. of School of Rural and Urban | | | 3155 | |
| Source-http://upmdm.org | | | | |

**SELECTION OF SAMPLE BLOCK AND TOWN**

The researcher chooses that town and block which has covered highest number of school among all the schools in their rural/urban area. Therefore, in urban area, Agra Municipal Corporation and in rural area, Fatehabad has been selected as a sample for the study.

**TOTAL NUMBER OF SCHOOL AND STUDENTS IN SELECTED BLOCK AND TOWN**

**Table 3 - Total Number of School and students in selected block and town**

| AGRA DISTRICT | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Area** | **Town/Block** | **No. of schools and Students** | | | | **Total Number Of Schools and students** | |
| | | **Primary ($1^{st}$ to $5^{th}$)** | | **Upper Primary ($6^{th}$ *to* $8^{th}$)** | | | |
| | | Schools | Students | Schools | Students | Schools | Students |
| Urban | Agra (M. C) | 214 | 15970 | 60 | 4580 | 274 | 20550 |
| Rural | Fatehabad | 208 | 16573 | 80 | 4307 | 288 | 20880 |
| Total Number of Schools and students | | 422 | 32543 | 140 | 8887 | 562 | 41430 |
| Source-http://upmdm.org | | | | | | | |

## SELECTION OF SCHOOLS FROM SELECTED BLOCK AND TOWN

5 Schools have been selected from urban (Agra M.C.) and rural area (Fathehabad) which has the highest Number of enrollment of students on July 2017 as shown in table no. 4 and 5.

**Table 4- List of selected schools from Agra Municipal Corporation (Urban) with their number of students**

| No. of Students In Selected Schools -Agra Municipal Corporation ( Urban) | | | | |
|---|---|---|---|---|
| **S.No.** | **Name of Primary school** | **No. of Students** | **Name of Upper primary Schools** | **No. of Students** |
| 1 | Sant Singh Kanya | 548 | Netaji Subhash Jhs Madhu Nagar | 321 |
| 2 | Haridas Balkesware | 373 | Pream Kanya Jhs Balkesware | 319 |
| 3 | Madarsa Mohnool Islam Mantola Agar | 360 | Gandhi Adarsh Yamuna Brij | 309 |
| 4 | Mahavir Digamber Jain P.S. Rajamandi Agra | 337 | Arya Kanya Jhs Gokulpura | 288 |
| 5 | Madarsa Aaliya Zama Mazzid | 325 | Manik Chand Veer Jhs Jagdishpura | 245 |
| | **Total no. of students** | **1943** | **Total no. of students** | **1482** |
| Source-http://upmdm.org | | | | |

**Table 5- List of selected schools from Fathehabad (Rural) with their number of students**

| No. of students in selected schools-Fathehabad ( Rural) | | | | |
|---|---|---|---|---|
| **S.No.** | **Name of school** | **Primary** | **Name of school** | **Upper primary** |
| 1 | Barana | 284 | Vrindawan | 117 |
| 2 | Indhon | 250 | Rihawali | 116 |
| 3 | Paroli | 225 | Dav I C Dimshree | 112 |
| 4 | Rasoolpur | 202 | Khander Tiketpura | 108 |
| 5 | Nagar Chand | 186 | Sbd G I C Ftd | 108 |
| | **Total no. of students** | **1147** | | **561** |
| Source-http://upmdm.org | | | | |

## SAMPLE SIZE OF THE STUDY

For the efficient sample size selection from the population the research demands to use a specific method (Krejcie & Morgan, 1970) under the study. The sample size of the study is 1153 respondents according to (Krejcie & Morgan, 1970).

**Table 6- Sample Size of Students from Agra District**

| AGRA DISTRICT | | | | | |
|---|---|---|---|---|---|
| **TOWN / BLOCK** | | **Number of Students** | **Universe** | **Sample** | **SAMPLE SIZE OF THE STUDY** |
| **URBAN** | **AGRA (M.C)** | | | | |
| | | **Primary($1^{st}$ to $5^{th}$ )** | **1943** | **322** | **628** |
| | | **Upper Primary ($6^{th}$ *to* $8^{th}$ )** | **1482** | **306** | |
| | | **TOTAL** | **3425** | **628** | |
| **RURAL** | **FATEHABAD** | **Primary($1^{st}$ to $5^{th}$ )** | **1147** | **291** | **525** |
| | | **Upper Primary ($6^{th}$ *to* $8^{th}$ )** | **561** | **234** | |
| **TOTAL** | | | **1708** | **525** | **1153** |

In addition to students the primary source of data will also be collected from Parents, teachers, cook cum-helper, Principal, and officials at block level, district level and administrative officers at State level involved in the MDMS.

**SOURCE OF DATA**

**Table 7 -Source of Data**

| TYPE | SOURCE OF DATA |
|---|---|
| **PRIMARY** | The primary data will be collected through questionnaire and schedule. Personal interviews and discussion will also be conducted with the people involved in MDMS. Participatory rural appraisal (PRA) Technique will also be used in the survey. |
| **SECONDARY** | The secondary data will be collected through Websites-<br>• www.mdm.nic.in, www.upmdm www.udise.in<br>• www.agra.nic.in www.uphed.gov.in www.up.gov.in<br>• www.upefa.com<br>Journals-<br>• International Journal of Applied Research<br>• International Journal of Multi-disciplinary Research and Modern Education<br>• Innovara Journal of Food Science<br>• Imperial Journal of Inter disciplinary Research<br>• International Journal of Humanities and Social Science Invention |

## 6.0 RESEARCH METHODOLOGY

Research methodology is an important constitute of the research plan. As per the objectives of study the following research methodology will be used:

| Objectives | Research Methodology |
|---|---|
| To study the rationale of the Mid- Day Meal Scheme. | By analyzing existing literature and interviews of experts from related field rationale will be list and rank as their importance. |
| To identify critical issues (Financial, Human resources, Infrastructural, Supply of Raw Material) and challenges associated with the Mid Day Meal Scheme in general and particular in Agra District. | A questionnaire will be prepared to collect the responses of officials, student, and school staff working in this area regarding the identified critical issues. Cluster analysis, Conjoint Analysis and factor analysis will also be used for the same. |
| To frame the role and responsibility matrix of authorities involved in the Mid-Day Meal Scheme at district and local level | To frame role and responsibility matrix, the authorities involved in MDMS will be surveyed. AMOS and PCA will be used. |
| To construct the Infrastructure Development Index for effective implementation of Mid-Day Meal Scheme in Agra District. | For constructing the Infrastructure Development Index, factor analysis and PCA will be used. |
| To develop action plan for efficient and effective functioning of Mid-Day Meal Scheme. | For testing the efficient and effective functioning of Mid-Day Meal Scheme, Structural equation modeling (SEM) will be used. |

## 6.1 TOOLS USED FOR DATA ANALYSIS

The present research work is both quantitative and qualitative in nature. Therefore, in order to analyze the collected data, the descriptive as well as the inferential statistical tools will be used.

**Descriptive Statistics**

Descriptive statistic helps in transforming raw data into an interpretable form and characterizing various aspects of a selected variable to provide descriptive information. In the study, data will be summarized by calculating Slope value of annual

expenditure of MDMS, Mean, Standard Deviation, Skewness, Kurtosis and Jarque-Bera test may also be used to conduct uni-variate analysis of select study variable.

**Inferential Statistics**

Inferential statistics will be used to make conclusions about the population parameters based on the statistics drawn from a representative sample data. Researcher will test significance level of different parameters on Effectiveness of Mid-Day Meal Scheme. For the purpose of analyzing the data appropriate econometric tools and techniques will be used as Principal Component Analysis (PCA), Regression Analysis, Multiple Discriminant Analysis, Cluster analysis, Conjoint Analysis and factor analysis, Chi-Square Test, etc. In addition to Panel Data Analysis and Structural equation modeling (SEM) may also be used.

**CHAPTERIZATION (PROPOSED CHAPTER PLAN):**

Chapter 1: Introduction & Over View of Study

Chapter 2: Review of literature and Research Gaps

Chapter 3: Research Design

Chapter 4: Formulation of Role and Responsibility Matrix for MDMS

Chapter 5: Construction of Infrastructure Development Index for MDMS

Chapter 6: Econometric Analysis and Results

Chapter 7: Findings, Suggestion and Conclusion

**REFERENCES**


1. **P, N. & Lone, A.Q. (2017). A Comparative Study On Mid-Day Meal And Non-Mid-Day Meal Beneficiaries Of Budgam District**. Innovara Jouranal Of Food Science, Vol 5, Issue 2, Issn,2321, 550x.
2. **Samal, J. & Dehury, R.K. (2017). Family Impact Analysis Of Mid-Day Meal (MDM) Scheme In India With Special Focus On Child Education And Nutrition.** Volume: 2 , Issue: 2, Page(S): 151-162Article First Published Online: August 16, 2017; Issue Published: July 1, 2017 Https://Doi.Org/10.1177/2455133317703212.
3. **Foundation, A. P. (2017). Impact Assessment And A Satisfaction Survey: The Akshaya Patra Foundation Mid-Day Meal Programme Bengaluru & Telangana**. The Nielsen Company (Us), LlC. Confidential And Proprietary.
4. **Narad, A. (2016). Implementation of Mid-Day Meal Scheme In Government Elementary Schools Of Bihar**. Mier Journal of Educational Studies, Trends & Practices. , Vol. 6, Pp. 68-81.
5. **Kadari, R. & Roy. S. M. (2016). Strengthening The Mid-Day Meal Scheme Through.** MIS.South Asian Journal of Engineering And Technology, Vol.2, No.10 (2016) 1–9, Issn Number (Online): 2454-9614.
6. **Kaur, M. (2016). Mid-Day Meal Scheme: An Analysis Before And After**. International Journal Of Applied Research, www.Allresearchjournal.Com, Issn Print: 2394-7500,Issn Online: 2394-5869.
7. **Ravi. (2016). An Assessment Of Mid-Day Mea.l Scheme In Himachal Pradesh.** A Thesis of M.Phil.

8. **Lalita1 & Rekhi T. (2016). Monitoring and Evaluation of Mid –Day Meal in Delhi Schools.** Imperial Journal of Interdisciplinary Research (IJIR), Vol-2, Issue-11, ISSN: 2454-1362, http://www.onlinejournal.in) .
9. **Prathap, G., Mohan, M. R., & Naidu, M. C. (2016). Evaluation of The Mid-Day Meal Programme In India: An Overview**. International Journal Of Multidisciplinary Research And Modern Education (Ijmrme), Volume Ii, Issue I, 2016 644, Issn (Online): 2454 - 6119 (www.Rdmodernresearch.Org).
10. **Bajpai, B. K. (2016). Pilot Social Audit of Mid-Day-Meal Scheme in Barabanki and Shrawasti Districts of Uttar Pradesh, Mid-Day-Meal Authority Uttar Pradesh** .Pilot Social Audit Of Mid-Day-Meal Scheme In Barabanki And Shrawasti Districts Of Uttar Pradesh.
11. **Rani, K. (2016). Implementation And Performance Evaluation Of Mid-Day Meal Scheme In Punjab – A Case Study Of Sangrur, Barnala & Mansa Districts.** A thesis of Ph.D in management, The Department of Management and Humanities Sant Longowal Institute of Engineering and Technology.
12. **Sheikh, M. F. M. J. (2015). Impact of Mid-Day Meal Programme On Educational Level: A Case Study Of Ballabhpur Village, Birbhum District, And West Bengal.** International Journal Of Innovative Research In Science, And Technology, Vol. 4, Issue 4, An Iso 3297: 2007 Certified Organization), , April 2015,Issn(Online) : 2319 – 8753 Issn (Print) : 2347 – 6710.
13. **Jayaramany, R., Simrothz. D., & Vericour F. D. (2015). The Impact Of School Lunches On Primary School Enrolment: Evidence From India's Midday Meal Scheme,** jayaraman@esmt.org, ESMT Berlin.z, simroth@esmt.org, ESMT Berlin.

14. **Sapkota, R. (2015). Value Chain Analysis Of Mid-Day Meal Scheme In Karnataka**. Masters In Sustainable Development Practice, Teri University New Delhi, India

15. **Sahoo, P. (2015). Descriptive Study On Effectiveness Of Mid-Day Meal Programme In Selected Government Primary School Of Bhubaneswar, Odisha.** International Journal Of Extensive Research. International J Ext Res. 9:26-31,Http://www.Journalijer.Com E-Print Issn: 2394-030.

16. **Singh, S., & Gupta, N. (2015).Impact Of Mid-Day Meal On Enrolment, Attendance And Retention Of Primary School Children.** International Journal Of Science And Research (Ijsr), Volume 4, Issn (Online): 2319-7064 Index Copernicus Value (2013): 6.14 | Impact Factor (2013): 4.438 ,Issue 2, February 2015 www.Ijsr.Net.

17. **Sharma, R. (2015). Mid-Day Meal Scheme In India: The Road Ahead. Developing Country Studies**, Vol.5, No.11, www.Iiste.Org Issn 2224-607x (Paper) Issn 2225-0565 (Online).

18. **Foundation, A. P. (2014). Assessment Of Mid-Day Meal Programme In 8 States**. Akshay Patra Foundation.

19. **Jagmag, M., & Tucker, T. (2014). Interactive Voice Response System: Closing Feedback Loops And Enhancing Accountability In The Mid-Day Meal Scheme**. Field Notes on Accountability, No. 5 Accountability Initiative.

20. **Chhabra, I., & Rao. A. K. (2014). Challenges and Interventions In Meeting Delivery Of Nutrition In Mid-Day Meal Scheme: A Pilot In District Faizabad, Uttar Pradesh**. Indian Journal Of Community Health, Vol 26.

21. www.mdm.nic.in

22. www.upmdm.nic.in

**23.** www.udise.in

_____ _____

Signature of Researcher Signature of Supervisor

_____ _____

Signature of Head
Dept. Applied .Business. Economics
Faculty of Commerce

Signature of Dean
Faculty of Commerce